

AMENDMENTS TO THE CLAIMS

1.-20 (Canceled)

21. (Currently amended) A cavity-embedded antenna comprising:

a ground plane having a cavity depending therefrom in a central region thereof;

a slotted plane spaced from said ground plane and overlying the opening of said cavity, said plate having a pair of crossed slots therein defining a pair of bowtie antennas, said bowtie antennas having triangular-shaped elements, the apices of opposed triangular-shaped elements forming feed points for the associated bowtie antennas;

a number of shunting elements across the distal ends of respective slots, the spacing of said shunting elements to said apices determining the transmission line impedance associated with the slots, said shunting elements including lossy dielectric material having a resistivity to provide that said shunting elements act as absorbers whereby said antenna is loaded by said slotline transmission lines.

22. (Previously presented) The antenna of Claim 21, wherein the distal ends of said slots are terminated by said plate, the distal ends of said slots being closed.

23. (Previously presented) The antenna of Claim 21, wherein the distal ends of said slots are open and wherein said shunting elements are sufficiently close to the distal ends of said slots that the associated transmission lines provide the requisite impedance to cancel the reactance of said antenna.

24. (Previously presented) The antenna of Claim 21, wherein said shunting elements include conductive material so as to short respective slots of said shunt elements.

25. (Cancel)

26. (Currently amended) The antenna of ~~Claim 25~~ Claim 21, wherein said lossy dielectric material is in the form of a resistive plastic sheet.

27. (Currently amended) ~~The antenna of Claim 21, wherein~~ A cavity-embedded antenna comprising:

a ground plane having a cavity depending therefrom in a central region thereof;

a slotted plane spaced from said ground plane and overlying the opening of said cavity, said plate having a pair of crossed slots therein defining a pair of bowtie antennas, said bowtie antennas having triangular-shaped elements, the apices of opposed triangular-shaped elements forming feed points for the associated bowtie antennas;

a number of shunting elements across the distal ends of respective slots, the spacing of said shunting elements to said apices determining the transmission line impedance associated with the slots, whereby said antenna is loaded by said slotline transmission lines, said pair of bowtie antennas-are being fed at respective feed points such as to give said antenna a linear polarization or a circular polarization, depending on the phasing of the signals applied to said feed points.

28.-37. (Withdrawn)